VOLUME 348 1996

TRANSACTIONS OF THE

AMERICAN MATHEMATICAL SOCIETY

EDITED BY

Rodrigo Bañuelos
Robert Bryant
Daniel M. Burns
Gregory L. Cherlin
Lawrence Ein
Philip J. Hanlon
John Mallet-Paret
Jill C. Pipher
Stewart Priddy
Daniel J. Rudolph
Peter Shalen, Managing Editor
Alice Silverberg
Robert J. Stanton
Efim Zelmanov•

PROVIDENCE, RHODE ISLAND USA

ISSN 0002-9947

Transactions of the American Mathematical Society

This journal is devoted entirely to research in pure and applied mathematics.

Submission information. See **Information for Authors** at the end of this issue.

Publisher item identifier. The Publisher Item Identifier (PII) appears at the top of each article published in this journal. This alphanumeric string of characters uniquely identifies each article and can be used for future cataloging, searching, and electronic retrieval.

Subscription information. *Transactions of the American Mathematical Society* is published monthly. Beginning in January 1996 *Transactions* is accessible from e-MATH via the World Wide Web at the URL `http://www.ams.org/publications/`. Subscription prices for Volume 348 (1996) are as follows: for paper delivery, $1039 list, $831 institutional member, $935 corporate member; for electronic delivery, $935 list, $748 institutional member, $842 corporate member; for combination paper and electronic delivery, $1195 list, $956 institutional member, $1076 corporate member. If ordering the paper version, add $27 for surface delivery outside the United States and India; $50 to India. Expedited delivery to destinations in North America is $38; elsewhere $127. For paper delivery a late charge of 10% of the subscription price will be imposed upon orders received from nonmembers after January 1 of the subscription year.

Back number information. For back issues see the *AMS Catalog of Publications.*

Subscriptions and orders should be addressed to the American Mathematical Society, P.O. Box 5904, Boston, MA 02206-5904. *All orders must be accompanied by payment.* Other correspondence should be addressed to P.O. Box 6248, Providence, RI 02940-6248.

Copying and reprinting. Material in this journal may be reproduced by any means for educational and scientific purposes without fee or permission with the exception of reproduction by services that collect fees for delivery of documents and provided that the customary acknowledgment of the source is given. This consent does not extend to other kinds of copying for general distribution, for advertising or promotional purposes, or for resale. Requests for permission for commercial use of material should be addressed to the Assistant to the Publisher, American Mathematical Society, P. O. Box 6248, Providence, RI 02940-6248. Requests can also be made by e-mail to `reprint-permission@ams.org`.

Excluded from these provisions is material in articles for which the author holds copyright. In such cases, requests for permission to use or reprint should be addressed directly to the author(s). (Copyright ownership is indicated in the notice in the lower right-hand corner of the first page of each article.)

Transactions of the American Mathematical Society is published monthly by the American Mathematical Society at 201 Charles Street, Providence, RI 02904-2213. Periodicals postage is paid at Providence, Rhode Island. Postmaster: Send address changes to Transactions, American Mathematical Society, P.O. Box 6248, Providence, RI 02940-6248.

© 1996 by the American Mathematical Society. All rights reserved.

This journal is indexed in *Science Citation Index®*, *SciSearch®*, *Research Alert®*, *CompuMath Citation Index®*, and *Current Contents®/Physical, Chemical & Earth Sciences.*

Printed in the United States of America.

⊗ The paper used in this journal is acid-free and falls within the guidelines established to ensure permanence and durability.

10 9 8 7 6 5 4 3 2 1 01 00 99 98 97 96

TRANSACTIONS OF THE AMERICAN MATHEMATICAL SOCIETY

CONTENTS

Vol. 348, No. 1 Whole No. 728 January 1996

Walter Bergweiler and Norbert Terglane, Weakly repelling fixpoints and the connectivity of wandering domains 1

A. R. Sourour, Invertibility preserving linear maps on $\mathcal{L}(X)$ 13

G. I. Lehrer, The space of invariant functions on a finite Lie algebra 31

Hermano Frid, Measure-valued solutions to initial-boundary value problems for certain systems of conservation laws: Existence and dynamics 51

Karel Dekimpe, Paul Igodt, and Kyung Bai Lee, Polynomial structures for nilpotent groups 77

Jeffrey C. Lagarias and Yang Wang, Nonnegative radix representations for the orthant R^n_+ 99

C. Martinez, Gelfand-Kirillov dimension in Jordan algebras 119

Patrick N. Dowling, Zhibao Hu, and Douglas Mupasiri, Complex convexity in Lebesgue-Bochner function spaces 127

V. P. Platonov and D. Ž. Đoković, Subgroups of $\mathrm{GL}(n^2, \mathbf{C})$ containing $\mathrm{PSU}(n)$ 141

Megan M. Kerr, Some new homogeneous Einstein metrics on symmetric spaces 153

Biao Zhang, On the variances of occupation times of conditioned Brownian motion 173

L. Brian Lawrence, Failure of normality in the box product of uncountably many real lines 187

Joel L. Jones, A concordance extension theorem 205

Z. Shi, A problem of Földes and Puri on the Wiener process 219

Paul Binding and Tomaž Košir, Second root vectors for multiparameter eigenvalue problems of Fredholm type 229

Stephen J. Gardiner, Uniform harmonic approximation of bounded functions 251

Hans Engler, Global smooth solutions for a class of parabolic integrodifferential equations 267

E. Hrushovski, P. H. Kropholler, A. Lubotzky, and A. Shalev, Powers in finitely generated groups 291

Alberto Arosio and Stefano Panizzi, On the well-posedness of the Kirchhoff string 305

Andrew Granville and Ken Ono, Defect zero p–blocks for finite simple groups 331

F. Gesztesy and B. Simon, Uniqueness theorems in inverse spectral theory for one-dimensional Schrödinger operators 349

Guido Haak, Negative flows of the potential KP-hierarchy 375

Manuel Ritoré and Antonio Ros, The spaces of index one minimal surfaces and stable constant mean curvature surfaces embedded in flat three manifolds 391

Vol. 348, No. 2 Whole No. 729 February 1996

Miroslav Engliš, Berezin quantization and reproducing kernels on complex domains 411
Stefano Capparelli, A construction of the level 3 modules for the affine Lie algebra $A_2^{(2)}$ and a new combinatorial identity of the Rogers-Ramanujan type 481
G. M. Constantine and T. H. Savits, A multivariate Faa di Bruno formula with applications 503
Yu Chen, Isomorphisms of adjoint Chevalley groups over integral domains 521
R. M. Aron, P. Galindo, D. García, and M. Maestre, Regularity and algebras of analytic functions in infinite dimensions 543
B. V. Rajarama Bhat, An index theory for quantum dynamical semigroups 561
Edward C. Waymire and Stanley C. Williams, A cascade decomposition theory with applications to Markov and exchangeable cascades 585
Wade C. Ramey and Heungsu Yi, Harmonic Bergman functions on half-spaces 633
Sh. Kaliman and M. Zaidenberg, A tranversality theorem for holomorphic mappings and stability of Eisenman-Kobayashi measures 661
Todor Todorov, An existence result for linear partial differential equations with C^∞ coefficients in an algebra of generalized functions 673
Holger Dette, Characterizations of generalized Hermite and sieved ultraspherical polynomials 691
Xiao-Biao Lin, Asymptotic expansion for layer solutions of a singularly perturbed reaction-diffusion system 713
Pekka Koskela, Juan J. Manfredi, and Enrique Villamor, Regularity theory and traces of $\mathcal{A}$-harmonic functions 755
Ruslan Sharipov and Alexander Sukhov, On $C\overset{\circ}{R}$-mappings between algebraic Cauchy-Riemann manifolds and separate algebraicity for holomorphic functions 767
Alfonso Castro and Alexandra Kurepa, Radial solutions to a Dirichlet problem involving critical exponents when $N = 6$ 781
Martin W. Liebeck, Jan Saxl, and Gary M. Seitz, Factorizations of simple algebraic groups 799

Vol. 348, No. 3 Whole No. 730 March 1996

Fatiha Alabau, Structural properties of the one-dimensional drift-diffusion models for semiconductors 823
I. P. Goulden and D. M. Jackson, Connection coefficients, matchings, maps and combinatorial conjectures for Jack symmetric functions 873
Vitaly Bergelson, Neil Hindman, and Bryna Kra, Iterated spectra of numbers—Elementary, dynamical, and algebraic approaches 893

Herve Jacquet and Yangbo Ye, Distinguished representations and quadratic base change for $GL(3)$ 913
Conrad Plaut, Geometrizing infinite dimensional locally compact groups 941
Héctor Sánchez-Morgado, R-torsion and zeta functions for analytic Anosov flows on 3-manifolds 963
Aleksander Simonič, An extension of Lomonosov's techniques to non-compact operators 975
Patrick Bonckaert, Partially hyperbolic fixed points with constraints 997
H. Aikawa and A. A. Borichev, Quasiadditivity and measure property of capacity and the tangential boundary behavior of harmonic functions 1013
Ronald L. Lipsman and Jonathan Rosenberg, The behavior of Fourier transforms for nilpotent Lie groups 1031
H. D. Junghenn, Operator semigroup compactifications 1051
Luis A. Caffarelli and Cristian E. Gutiérrez, Real analysis related to the Monge-Ampère equation 1075
Ross Niebergall and Patrick J. Ryan, Affine Dupin surfaces 1093
Minking Eie, A note on Bernoulli numbers and Shintani generalized Bernoulli polynomials 1117
Scott Nollet, Even linkage classes 1137
Clifford J. Earle and Frederick P. Gardiner, Geometric isomorphisms between infinite dimensional Teichmüller spaces 1163
Anthony To-Ming Lau and Ali Ülger, Topological centers of certain dual algebras 1191
Xian-jin Li, On the poles of Rankin-Selberg convolutions of modular forms 1213

Vol. 348, No. 4 **Whole No. 731** **April 1996**

Boris S. Mordukhovich and Yongheng Shao, Nonsmooth sequential analysis in Asplund spaces 1235
P. Hell, J. Nešetřil, and X. Zhu, Duality and polynomial testing of tree homomorphisms 1281
Anders Björner and Michelle L. Wachs, Shellable nonpure complexes and posets. I 1299
Selman Akbulut, On universal relations in gauge theory 1329
Alexander Blokh, A. M. Bruckner, P. D. Humke, and J. Smítal, The space of ω-limit sets of a continuous map of the interval 1357
Peter McMullen and Egon Schulte, Twisted groups and locally toroidal regular polytopes 1373
Jorge D. Samur, Some remarks on a probability limit theorem for continued fractions 1411
C. K. Cheung and Kang-Tae Kim, Analysis of the Wu metric. I: The case of convex Thullen domains 1429
Franz Peherstorfer and Robert Steinbauer, Comparative asymptotics for perturbed orthogonal polynomials 1459

Piotr Minc, A periodic point free homeomorphism of a tree-like continuum 1487
Jan Trlifaj, Whitehead test modules 1521
Shreeram S. Abhyankar, Further nice equations for nice groups 1555
Mark J. Gotay, Hendrik Grundling, and C. A. Hurst, A Groenewold-Van Hove theorem for S^2 1579
Viviane Baladi, Yunping Jiang, and Oscar E. Lanford III, Transfer operators acting on Zygmund functions 1599
Jonathan M. Borwein and Jon D. Vanderwerff, Epigraphical and uniform convergence of convex functions 1617
Franki Dillen and Luc Vrancken, Totally real submanifolds in $S^6(1)$ satisfying Chen's equality 1633
Jerzy Dydak, Cohomological dimension and metrizable spaces. II 1647

Vol. 348, No. 5 **Whole No. 732** **May 1996**

Athanassios G. Kartsatos, New results in the perturbation theory of maximal monotone and M-accretive operators in Banach spaces 1663
Jacques Alev, Alfons Ooms, and Michel Van den Bergh, A class of counterexamples to the Gel'fand-Kirillov conjecture 1709
Michael A. Bennett, Simultaneous rational approximation to binomial functions 1717
John Kalliongis and Darryl McCullough, Orientation-reversing involutions on handlebodies 1739
Richard Chow, Groups quasi-isometric to complex hyperbolic space 1757
Sheng Gong and Xuean Zheng, The Bergman kernel function of some Reinhardt domains 1771
R. A. Poliquin and R. T. Rockafellar, Prox-regular functions in variational analysis 1805
John Harding, Decompositions in quantum logic 1839
W. G. Dwyer and C. W. Wilkerson, Diagrams up to cohomology 1863
Christina Birkenhake, Noncomplete linear systems on abelian varieties . 1885
William Crawley-Boevey, On homomorphisms from a fixed representation to a general representation of a quiver 1909
Boško Živaljević, Hyperfinite transversal theory. II 1921
Taro Asuke, On transversely flat conformal foliations with good measures 1939
E. B. Dynkin and S. E. Kuznetsov, Linear additive functionals of superdiffusions and related nonlinear P.D.E. 1959
D. G. James and C. Maclachlan, Fuchsian subgroups of Bianchi groups 1989
Yuri Kifer, Fractal dimensions and random transformations 2003
Ross Geoghegan, Andrew Nicas and John Oprea, Higher Lefschetz traces and spherical Euler characteristics 2039
Gregory J. Galloway and Arnaldo Horta, Regularity of Lorentzian Busemann functions 2063
Jean Calbrix, k-spaces and Borel filters on the set of integers 2085

Vol. 348, No. 6 Whole No. 733 June 1996

S. V. Ivanov and A. Yu. Ol′shanskii, Hyperbolic groups and their quotients of bounded exponents 2091
Hansjörg Geiges and Jesús Gonzalo, An application of convex integration to contact geometry 2139
Jan Kubarski, Bott's vanishing theorem for regular Lie algebroids 2151
Ferenc Weisz, Cesàro summability of two-dimensional Walsh-Fourier series 2169
Hiroshi Ikeda, Ω-inverse limit stability theorem 2183
Dilip Bayen and Robert R. Bruner, Real connective K-theory and the quaternion group 2201
Mátyás Domokos, Relatively free invariant algebras of finite reflection groups 2217
Martin Bridgeman, The structure and enumeration of link projections .. 2235
Francesco Baldassarri, Special values of symmetric hypergeometric functions 2249
G. J. Murphy and N. C. Phillips, C*-algebras with the approximate positive factorization property 2291
Lars Andersson, Mattias Dahl, and Ralph Howard, Boundary and lens rigidity of Lorentzian surfaces 2307
Wayne Smith, Composition operators between Bergman and Hardy spaces 2331
C. Rebelo and F. Zanolin, Multiplicity results for periodic solutions of second order ODEs with asymmetric nonlinearities 2349
Yunping Jiang, Smooth classification of geometrically finite one-dimensional maps 2391
Martin van Gemmeren, Total absolute curvature and tightness of non-compact manifolds 2413
Bojan Magajna, Tensor products over abelian W^*-algebras 2427
Hillel Gauchman and Gabor Toth, Fine structure of the space of spherical minimal immersions 2441
K. A. Brown and K. R. Goodearl, Prime spectra of quantum semisimple groups 2465
Pietro Poggi-Corradini, Hardy spaces and twisted sectors for geometric models 2503

Vol. 348, No. 7 Whole No. 734 July 1996

S. Rohde, On functions in the little Bloch space and inner functions 2519
Antonio Bove and David S. Tartakoff, Propagation of Gevrey regularity for a class of hypoelliptic equations 2533
David S. Tartakoff, Global (and local) analyticity for second order operators constructed from rigid vector fields on products of tori 2577
Osamu Saeki and Kazuhiro Sakuma, Immersed n-manifolds in $\mathbf{R}^{2n}$ and the double points of their generic projections into $\mathbf{R}^{2n-1}$ 2585

Mahito Kobayashi and Osamu Saeki, Simplifying stable mappings into the plane from a global viewpoint 2607
John Franks, Rotation vectors and fixed points of area preserving surface diffeomorphisms 2637
Kai-Ching Lin, Extremal functions for Moser's inequality 2663
Lizhen Ji, Spectral convergence for degenerating sequences of three dimensional hyperbolic manifolds 2673
W. M. Oxbury and S. M. J. Wilson, Reciprocity laws in the Verlinde formulae for the classical groups 2689
Francesco Mercuri and Maria Helena Noronha, Low codimensional submanifolds of Euclidean space with nonnegative isotropic curvature 2711
Geng Xu, Divisors on generic complete intersections in projective space .. 2725
Francisco J. Lopez, On complete nonorientable minimal surfaces with low total curvature 2737
Yung Yu, On Jacobian ideals invariant by a reducible $s\ell(2, \mathbf{C})$ action 2759
Ioannis A. Polyrakis, Finite-dimensional lattice-subspaces of $C(\Omega)$ and curves of $\mathbb{R}^n$ 2793
Qi Zhang, On a parabolic equation with a singular lower order term 2811
J. Aaronson, R. Burton, H. Dehling, D. Gilat, T. Hill, B. Weiss, Strong laws for L- and u-statistics 2845
James J. Zhang, On Gelfand-Kirillov transcendence degree 2867
Alec Matheson and Alexander R. Pruss, Properties of extremal functions for some nonlinear functionals on Dirichlet spaces 2901
A. Salwa, Representations of monoids arising from finite groups of Lie type 2931

Vol. 348, No. 8 **Whole No. 735** **August 1996**

Houhong Fan, Half De Rham complexes and line fields on odd-dimensional manifolds 2947
Luzius Grunenfelder and Tomaž Košir, An algebraic approach to multiparameter spectral theory 2983
Oliver Knill, Topological entropy of standard type monotone twist maps . 2999
Robert Molzon and Karen Pinney Mortensen, The Schwarzian derivative for maps between manifolds with complex projective connections 3015
Francisco J. Castro-Jiménez, Luis Narváez-Macarro, and David Mond, Cohomology of the complement of a free divisor 3037
Vestislav Apostolov, Johann Davidov, and Oleg Muškarov, Compact self-dual Hermitian surfaces 3051
Christian Pappas, Extensions of codimension one immersions 3065
Yanghyun Byun, On vanishing of characteristic numbers in Poincaré complexes 3085
Sylvain Gervais, Presentation and central extensions of mapping class groups 3097

N. Caroff and H. Frankowska, Conjugate points and shocks in nonlinear optimal control 3133
Richard Kenyon, A group of paths in $\mathbb{R}^2$ 3155
Doris Fiebig and Ulf-Rainer Fiebig, The automorphism group of a coded system 3173
Yimin Xiao, Packing measure of the sample paths of fractional Brownian motion 3193
R. Galeeva and S. van Strien, Which families of l-modal maps are full? 3215
Edgar E. Enochs, Overtoun M.G. Jenda, and Jinzhong Xu, Foxby duality and Gorenstein injective and projective modules 3223
Mariusz Rabus, An ω_2-minimal Boolean algebra 3235
O. Davey, E. Hart, and K. Trapp, Computation of Nielsen numbers for maps of closed surfaces 3245
Detlev W. Hoffmann, On quadratic forms of height two and a theorem of Wadsworth 3267
M. G. Marinari, H. M. Möller, and T. Mora, On multiplicities in polynomial system solving 3283
Carlos E. Kenig, Gustavo Ponce, and Luis Vega, Quadratic forms for the 1-D semilinear Schrödinger equation 3323
Christopher Towse, Weierstrass points on cyclic covers of the projective line 3355
Julio T.-Y. Wang, S-integral points of $\mathbb{P}^n - \{2n+1$ hyperplanes in general position over number fields and function fields$\}$ 3379

Vol. 348, No. 9 **Whole No. 736** **September 1996**

Lawrence S. Levy and Charles J. Odenthal, Krull-Schmidt theorems in dimension 1 3391
Lawrence S. Levy and Charles J. Odenthal, Package deal theorems and splitting orders in dimension 1 3457
Martin Markl and Steve Shnider, Drinfel'd algebra deformations, homotopy comodules and the associahedra 3505
Paul Selick, Homology and some homotopy decompositions for the James filtration on spheres 3549
Paul Selick, Constructing product fibrations by means of a generalization of a theorem of Ganea 3573
Sergey Fomin and Anatol N. Kirillov, Combinatorial B_n-analogues of Schubert polynomials 3591
Paul S. Muhly, Jean N. Renault, and Dana P. Williams, Continuous-trace groupoid C^*-algebras. III 3621
David L. Russell and Bing-Yu Zhang, Exact controllability and stabilizability of the Korteweg-de Vries equation 3643
B. A. Davey and H. A. Priestley, Optimal natural dualities. II: General theory 3673

Christine M. Escher, Minimal isometric immersions of inhomogeneous spherical space forms into spheres— a necessary condition for existence 3713
Yu Chen, On representations of affine Kac-Moody groups and related loop groups 3733
Alexandre V. Borovik, Laszlo Pyber, and Aner Shalev, Maximal subgroups in finite and profinite groups 3745
Jong Bum Lee, Kyung Bai Lee, and Frank Raymond, Seifert manifolds with fiber spherical space forms 3763
James Haglund, Rook theory, compositions, and zeta functions 3799
Chris Bernhardt, On the ordering of n-modal cycles 3827

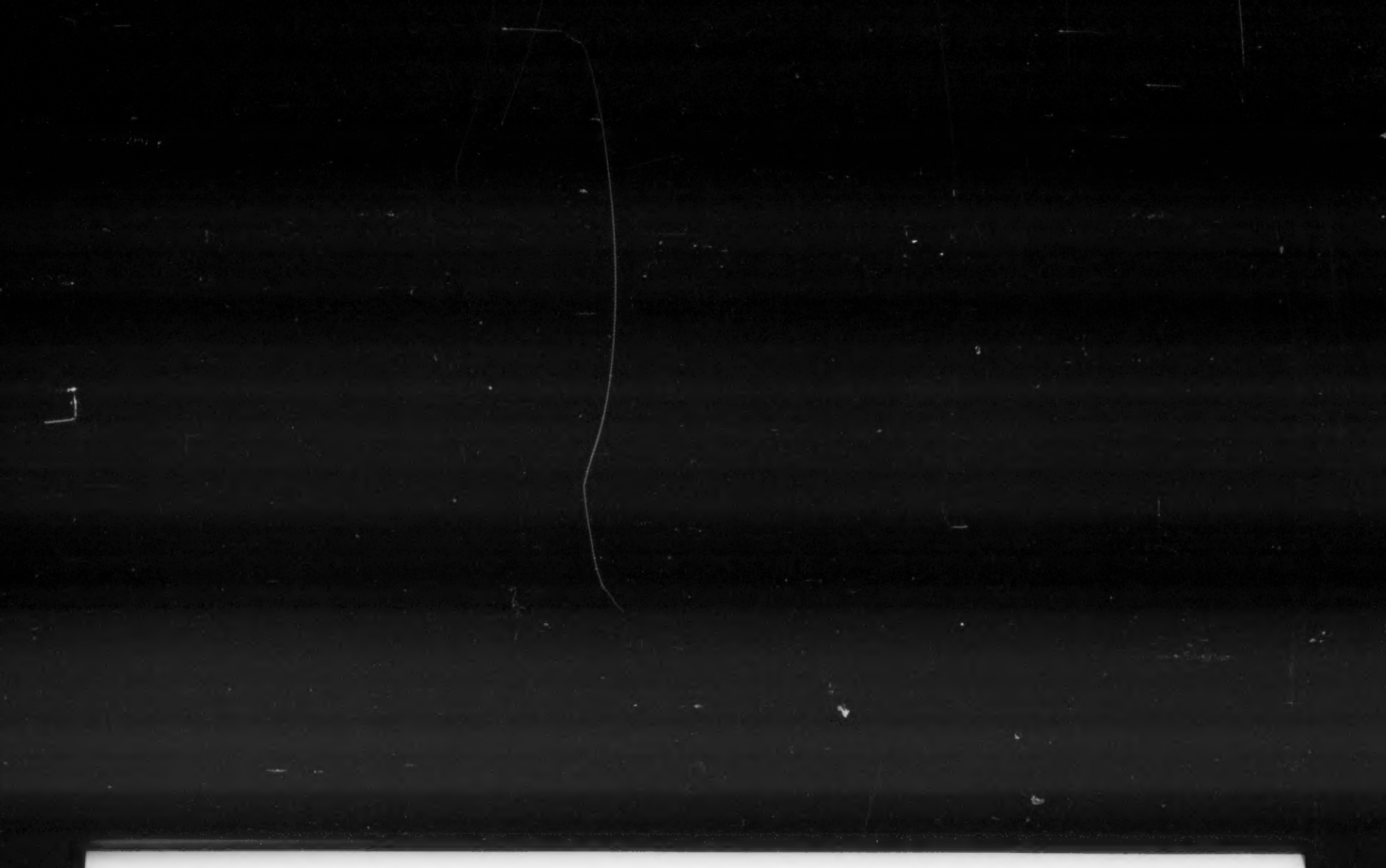
Vol. 348, No. 10 **Whole No. 737** **October 1996**

Tasso J. Kaper and Gregor Kovačič, Multi-bump orbits homoclinic to resonance bands 3835
Andreas Baudisch, A new uncountably categorical group 3889
Thomas J. Hunter, On the homology spectral sequence for topological Hochschild homology 3941
A. R. Aithal and G. Santhanam, Sharp upper bound for the first non-zero Neumann eigenvalue for bounded domains in rank-1 symmetric spaces 3955
Tom Halverson and Arun Ram, Murnaghan-Nakayama rules for characters of Iwahori-Hecke algebras of classical type 3967
John W. Barrett and Bruce W. Westbury, Invariants of piecewise-linear 3-manifolds 3997
Vassiliki Farmaki, On Baire-1/4 functions 4023
Stanley C. Williams, Transfinite multifractal dimension spectrums 4043
S. B. Hsu, H. L. Smith, and Paul Waltman, Competitive exclusion and coexistence for competitive systems on ordered Banach spaces 4083
A. Yu. Solynin and M. Vuorinen, Extremal problems and symmetrization for plane ring domains 4095
Jun-ichi Tanaka, Single generator problem 4113
Yasunari Fukai and Kôhei Uchiyama, Wiener's test for space-time random walks and its applications 4131
Douglas R. Farenick and Woo Young Lee, Hyponormality and spectra of Toeplitz operators 4153
D.-Q. Zhang, Algebraic surfaces with log canonical singularities and the fundamental groups of their smooth parts 4175
Yoshiaki Fukuma, On polarized surfaces (X, L) with $h^0(L) > 0$, $\kappa(X) = 2$, and $g(L) = q(X)$ 4185
Hongbing Su, K-theoretic classification for certain inductive limit Z_2 actions on real rank zero C*-algebras 4199
A. James Humphreys and Stephen G. Simpson, Separable Banach space theory needs strong set existence axioms 4231
Saharon Shelah and Otmar Spinas, Gross spaces 4257

Vol. 348, No. 11 Whole No. 738 November 1996

Zhi-Wei Sun, Covering the integers by arithmetic sequences. II 4279
Emilio Musso and Lorenzo Nicolodi, A variational problem for surfaces in Laguerre geometry 4321
David B. Jaffe, Functorial structure of units in a tensor product 4339
Fritz Colonius and Wolfgang Kliemann, The Morse spectrum of linear flows on vector bundles 4355
Fritz Colonius and Wolfgang Kliemann, The Lyapunov spectrum of families of time-varying matrices 4389
Ron C. Blei, Projectively bounded Fréchet measures 4409
Christopher J. Bishop and Yuval Peres, Packing dimension and Cartesian products 4433
E. Arthur Robinson, Jr., The dynamical properties of Penrose tilings .. 4447
Zhongwei Shen, Eigenvalue asymptotics and exponential decay of eigenfunctions for Schrödinger operators with magnetic fields 4465
Bolis Basit and Hans Günzler, Abstract functions with continuous differences and Namioka spaces 4489
Xu-Jia Wang, Existence of convex hypersurfaces with prescribed Gauss-Kronecker curvature 4501
Charles L. Hagopian, The fixed-point property for simply connected plane continua 4525
Janko Gravner, The boundary of iterates in Euclidean growth models ... 4549
Alberto Facchini, Krull-Schmidt fails for serial modules 4561
Qing Liu, Modèles entiers des courbes hyperelliptiques sur un corps de valuation discrète 4577
Jan Saxl, Saharon Shelah, and Simon Thomas, Infinite products of finite simple groups 4611
Friedbert Prüfer, Franco Tricerri, and Lieven Vanhecke, Curvature invariants, differential operators and local homogeneity 4643
Sandra L. Shields, The stability of foliations of orientable 3-manifolds covered by a product 4653
Allan J. Silberger, Harish-Chandra's Plancherel theorem for p-adic groups 4673
Anne-Marie Aubert, Erratum à "Dualité dans le groupe de Grothendieck de la catégorie des représentations lisses de longueur finie d'un groupe réductif p-adique" 4687

Vol. 348, No. 12 Whole No. 739 December 1996

Uma Krishnan and V. S. Sunder, On biunitary permutation matrices and some subfactors of index 9 4691
Hans Joachim Baues, On the group of homotopy equivalences of a manifold 4737

Birge Huisgen-Zimmermann, The geometry of uniserial representations of finite dimensional algebras. III: Finite uniserial type 4775
Gennady S. Makanin, Multiplication of natural number parameters and equations in a free semigroup 4813
Yves Martin, Multiplicative η-quotients 4825
Alexandre I. Danilenko and Valentin Ya. Golodets, On extension of cocycles to normalizer elements, outer conjugacy, and related problems 4857
J. M. Combes, P. D. Hislop, and E. Mourre, Spectral averaging, perturbation of singular spectra, and localization 4883
V. I. Chilin, P. G. Dodds, A. A. Sedaev, and F. A. Sukochev, Characterizations of Kadec-Klee properties in symmetric spaces of measurable functions 4895
M. Lemańczyk, F. Parreau, and D. Volný, Ergodic properties of real cocycles and pseudo-homogeneous Banach spaces 4919
Hiroyasu Izeki, A deformation of flat conformal structures 4939
Chengbo Yue, The ergodic theory of discrete isometry groups on manifolds of variable negative curvature 4965
M. E. Fels, The inverse problem of the calculus of variations for scalar fourth-order ordinary differential equations 5007
V. Afraimovich, A. Babin, and S.-N. Chow, Spatial chaotic structure of attractors of reaction-diffusion systems 5031
Walter Roth, Integral type linear functionals on ordered cones 5065
Martin Blümlinger, Lévy group action and invariant measures on $\beta\mathbb{N}$ ... 5087